



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/587,967

07/31/2006

Peter Ludwig

64349US010

6670

32692 7590 07/29/2010
3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

MOORE, WALTER A

ART UNIT

PAPER NUMBER

1783

NOTIFICATION DATE

DELIVERY MODE

07/29/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com
LegalDocketing@mmm.com

Office Action Summary	Application No. 10/587,967	Applicant(s) LUDWIG, PETER	
	Examiner WALTER MOORE	Art Unit 1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

RESPONSE TO AMENDMENT

Status of Claims

1. Claims 1-14 are pending. Claims 1 and 13 were amended in the response filed on 7/15/2010.

Withdrawn Rejections

2. The objection to claim 13, made of record in the office action mailed on 4/15/2010, have been withdrawn due to applicant's amendment filed on 7/15/2010.

REJECTIONS

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sher et al., USPN 6,197,397.

Regarding claim 1, Sher teaches a separating layer carrier (release liner, col. 5, ln. 55) comprising a laminar substrate (col. 9, ln. 17-22) and a separating layer applied thereon (silicone release coating, col. 9, ln. 17-22). Sher discloses the carrier comprises a relief structure with raised sections (ridges, fig. 1, #28, col. 5, ln. 65) forming substantially complementary channels in a layer of adhesive (col. 6, ln. 35-38), through which air trapped during adhesion can escape

Art Unit: 1783

(col. 5, ln. 22). Sher discloses the relief structure is provided, at least in part, by an imprint of a printing material (silicone release coating, col. 9, ln. 17-22).

Regarding the "in a pattern" limitation (claim 1, ln. 5), Sher reads on the limitation is at least two independent ways. First, Sher discloses a pattern (fig. 1, #24, col. 5, ln. 63) comprising a series of ridges (fig. 1, #28, col. 5, ln. 65) on the substrate. This pattern is formed by an imprint of a printing material (silicone release coating, col. 9, ln. 17-22). Second, Sher discloses the release liners are either coated then embossed or embossed then coated (col. 9, ln. 17-22). Any pattern of release material coating, whether continuous or discontinuous, reads on a pattern. In other words, a continuous coating is a continuous or solid pattern.

Regarding claims 2-4, Sher discloses the substrate comprised paper (col. 9, ln. 17) coated with plastic (col. 9, ln. 17).

Regarding claim 5, Sher teaches the substrate comprises plastic film (col. 9, ln. 17-20).

Regarding claim 6, Sher teaches the substrate comprised plastic film coated with plastic (col. 9, ln. 18-19).

Regarding claim 7, Sher does not expressly state the relief structure is imprinted on the entire surface of the separating layer carrier (release liner). However, Sher implies the relief structure exists on the interlayer support (release liner) in three different ways.

First, Sher implies the relief structure (microembossed pattern) is imprinted entirely on the separating layer carrier (release liner). In Sher, the relief pattern was formed by passing the multiple layer film laminate through an engraved roller apparatus, which formed a relief pattern on the separating layer carrier (release liner, col. 15, ln. 19-21). Since there is a plastic layer in the separating layer carrier (release liner) and there was a relief structure formed on the

Art Unit: 1783

separating layer carrier (release liner), there was a relief structure formed on the plastic coating of the interlayer support (release liner) taught in Sher. Sher does not indicate that there is a margin section to the rollers. Furthermore, the pattern formed on the substrate is a “pattern of continuous raised intersecting microridges” (Col. 15, ln. 31). The lack of a margin on the periphery of the rollers and the continuous pattern implies that the relief pattern is formed on the entire surface of the substrate.

Second, Figure 1 is photograph of a substrate (release liner). Figure 1 shows a relief structure over the entire surface of the substrate in the photograph.

Third, Sher prepared several test samples. The test samples have a substrate with a relief pattern printed on the entire surface of the substrate. Sher conducted tests of the various properties of the adhesive material. In order to form each test sample, Sher passed a substrate (release liner) through a roller with a continuous pattern (col. 15, ln. 31). After passing through the roller assembly, adhesive was applied to each sample (col. 16, Examples 6-8, ln. 66). Then, Sher cut a circular section out of the adhesive material (col. 13, ln. 49-65). Cutting a circular section out of a prepared adhesive material implies that the relief pattern existed on the entire surface of the test sample. In order to form the relief pattern on the adhesive, a relief pattern existed on the substrate contacting the adhesive (col. 3, ln. 35-36; and col. 15, ln. 59-60). So, the relief pattern covered the entire substrate of the test sample.

Regarding claims 8 and 13, Sher prepared an example with interconnected hexagons in a honeycomb arrangement (col. 21, ln. 1).

Regarding claim 9, Sher teaches the shape of the relief pattern could be based on Euclidean or fractal geometry (col. 4, ln. 29). Euclidean geometry includes all shapes of

Art Unit: 1783

polygons. Furthermore, fractals are complex mathematically defined shapes, which appear to be repeating sequences of random shape distributions.

Regarding claim 10, Sher teaches the relief structure comprises sections having a width of 165 μm (col. 16, ln. 39) and a height between 25 and 30 μm (col. 16, ln. 39).

Regarding claim 11, Sher teaches the area of the polygons was 0.5929 mm^2 (col. 16, Table 1; "Engraved Roll Groove Spacing", $0.77\text{mm} \times 0.77\text{mm} = 0.5929 \text{mm}^2$).

Regarding claim 12, Sher teaches the separating layer carrier comprises a self adhesive material (pressure sensitive adhesive, col. 15, ln. 44).

5. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hannington, USPA 2001/0031353.

Regarding claims 1 and 12, Hannington discloses a separating layer carrier comprising a laminar substrate (release liner, fig. 4, #44, p. 6, para 0050), a separating layer (silicone release coating, p. 4, para 0040), and a relief structure (non-adhesive areas, fig. 4, #43, p. 5, para 0050). Hannington discloses channels in the adhesive for air to escape (p. 6, para 0050, last line). Hannington discloses the relief structure (non-adhesive areas) is a printing material (ink, p. 1, para 0017) on the substrate (release liner, fig. 4, #44, p. 6, para 0050).

Regarding the "in a pattern" limitation (claim 1, ln. 5), Hannington expressly discloses the printing material is printed in a pattern (p. 3, para 0031).

Regarding claims 2-6, Hannington discloses the substrate is a plastic coated paper (polyethylene coated paper, p. 4, para 0040) or a plastic film coated with plastic (polyethylene coated PET, p. 4, para 0040).

Art Unit: 1783

Regarding claim 7, Hannington discloses the imprint covers the entire surface (p. 3, para 0031, ln. 4-6).

Regarding claims 8 and 13, Hannington discloses the imprint can be hexagons (p. 3, para 0031).

Regarding claim 9, Hannington discloses random combinations of patterns can be used (p. 3, para 0031).

Regarding claim 10, Hannington discloses the relief structure has a height between 0.3 and 100 microns and a width of between 12 and 250 microns (p. 3, para 0031).

Claim Rejections - 35 USC § 103

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sher et al., USPN 6,197,397.

Sher is relied on as above regarding the section 102 rejection. If Sher does not anticipate the claimed shapes then Sher renders the claimed shapes obvious.

Sher teaches a relief pattern having corner joined polygons (fig. 1 and 3; and col. 15, ln. 30-32). Sher teaches it is within the skill in the art to create any pattern desired, including Euclidean geometric patterns with any size, shape, and depth (Col. 7, ln. 49-54). Sher suggests that the irregular shape aids in fluid egress from under the adhesive layer as it is applied to a substrate (col. 7, ln. 38-40).

It is well settled that a particular shape of a prior invention carries no patentable weight unless the applicant can demonstrate that the new shape provides significant unforeseen improvements to the invention. In the instant case, the application does not indicate any new,

Art Unit: 1783

significant attributes of the invention due to its shape which would have been unforeseen to one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to change the shape, taught in Sher, to stochastically shaped and distributed irregular polygons. One skilled in the art would have been motivated to do so in order to improve fluid egress (col. 7, ln. 38-40). MPEP 2144.04 IV.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannington, USPA 2001/0031353.

Hannington is relied on as above. If Hannington does not anticipate the shape of claim 9, then Hannington renders the shape obvious.

Hannington discloses the relief structure can be a grid, weave pattern, waffle pattern, diagonal or straight lines, hexagons, rectangles, circles, and triangles (p. 3, para 0031).

Hannington also discloses combinations of patterns can be used (p. 3, para 0031). Therefore, Hannington establishes it is within the level of one of ordinary skill in the art to make a variety of shapes to provide fluid egress.

It is well settled that a particular shape of a prior invention carries no patentable weight unless the applicant can demonstrate that the new shape provides significant unforeseen improvements to the invention. In the instant case, the application does not indicate any new, significant attributes of the invention due to its shape which would have been unforeseen to one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to change the shape, taught in Hannington, to stochastically shaped and distributed irregular polygons. MPEP 2144.04 IV.

Art Unit: 1783

8. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sher et al., USPN 6,197,397, in view of Scarborough et al., USPA 2003/0211295.

Note, this rejection is in the alternative to the rejection over Sher above. The alternative presented in this rejection is based on the substitution of embossment, as taught in Sher, with printed ink, as taught in Scarborough.

Regarding claim 1, Sher teaches a separating layer carrier (release liner, col. 5, ln. 55) comprising a laminar substrate (col. 9, ln. 17-22) and a separating layer applied thereon (silicone release coating, col. 9, ln. 17-22). Sher discloses the carrier comprises a relief structure with raised sections (ridges, fig. 1, #28, col. 5, ln. 65) forming substantially complementary channels in a layer of adhesive (col. 6, ln. 35-38), through which air trapped during adhesion can escape (col. 5, ln. 22). Sher discloses the relief structure is made by embossing a pattern on the release liner (col. 3, ln. 52-53).

Scarborough is drawn to a printed article (Abstract). Scarborough discloses a printed pattern (fig. 1, #23, p. 2, para 0027) made from a printing material (fig. 1, #22, p. 2, para 0027). Scarborough discloses the printed pattern creates a three dimensional surface without the cost of embossing (p. 1, para 0008). It would have been obvious to one of ordinary skill in the art at the time of invention to substitute a printed pattern, as taught in Scarborough, for the embossing, as taught in Sher, to obtain a separating layer carrier comprising relief structures imprinted with printing material. One of ordinary skill in the art would have been motivated to substitute the printed pattern to save the cost associated with embossing (p. 1, para 0008). Sher and Scarborough are analogous art related three dimensional textured surfaces.

Sher is relied on above regarding claims 2-13.

Art Unit: 1783

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Sher et al., USPN 6,197,397 as applied to claims 1-13 above; or Sher et al., USPN 6,197,397, in view of Scarborough et al., USPA 2003/0211295, as applied to claims 1-13 above; and further in view of O'Donnell et al., USPN 6,254,582.

Sher and Sher in view of Scarborough are relied on as above. Sher and Sher in view of Scarborough do not teach the relief structure (silicon coating) is a silicon ink.

O'Donnell is drawn to adhesive articles (panty liners, col. 3, ln. 62) comprising silicone release coating (col. 4, ln. 60). O'Donnell discloses the silicone release coating is applied with gravure coaters or ink jet printing (col. 5, ln. 1). Therefore, O'Donnell discloses silicone ink is a conventional release coating. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use silicone printing ink, as taught in O'Donnell, in the separating carrier, taught in Sher and/or Sher in view of Scarborough, to obtain a separating layer carrier having a silicone printing ink since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. MPEP § 2144.07.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannington, USPA 2001/0031353, in view of Sessions, USPN 6,350,339.

Hannington is relied on as above.

Hannington does not disclose silicone printing ink.

Sessions is drawn to a means to improve the release of an adhesive layer (col. 8, ln. 53-56). Sessions teaches printing ink lines over an adhesive layer (col. 8, ln. 53-54). Sessions

Art Unit: 1783

discloses the ink contains silicone (col. 4, ln. 11-12). Sessions discloses the ink provides interruption of the adhesive layer to facilitate removal (col. 8, ln. 55-56). It would have been obvious to one of ordinary skill in the art at the time of invention to use silicone ink, as taught in Sessions, in the separation layer carrier, taught in Hannington, to obtain a separating layer carrier comprising silicone ink. One of ordinary skill in the art would have been motivated to use silicone ink because it deadens the adhesive and facilitates adhesive removal (Sessions, col. 8, ln. 55-61).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4, and 6-13 of copending Application

Art Unit: 1783

No. 10/588134. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons:

Regarding claim 1, '134 claims a separating layer carrier (interlayer support, claim 1) comprising a relief structure (claim 1), which forms channels in an adhesive layer (claim 1). '134 claims the relief structure is provided by an imprint (claims 4 and 11) of printing material (plastic coating, claims 4 and 11) in a pattern (polygons, claim 1).

Regarding claims 2-6, '134 claims the substrate comprises paper (claims 6 and 11), plastic coated paper (claims 8 and 11), plastic film (claims 7 and 11), or plastic coated plastic film (claim 11).

Regarding claim 7, '134 claims the relief structure is on the entire surface (claim 12).

Regarding claim 9, '134 claims the relief structure is irregular polygons (claim 1).

Regarding claim 10, '134 claims the relief structure has a width between 50 and 200 microns and a height between 5 and 40 microns (claim 2).

Regarding claim 12, '134 claims the carrier is self adhesive (claim 13).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

13. Applicant's arguments filed 7/15/2010 have been fully considered but they are not persuasive.

Applicant argues the continuous release coating in Sher is not an imprint of a printing material in a pattern (Remarks, p. 4, para 4). Examiner is not persuaded by this argument for the reasons stated in the above rejection over Sher.

Applicant argues Hannington fails to teach a separating layer carrier comprising a laminar substrate and a separating layer carrier applied thereon because the element #43 is printed on the adhesive (Remarks, p. 4, last paragraph). Examiner is not persuaded by these arguments for several reasons. First, the claims claim the imprint of printing material is on the substrate (claim 1, ln. 5). Hannington discloses a printing material (non-adhesive areas, fig. 4, #43, p. 5, para 0050) on a substrate (release liner, fig. 4, #44, p. 6, para 0050). Furthermore, the method of making the product, i.e. printing material on a substrate or printing material on an adhesive fails to distinguish the claimed product from the product disclosed in the prior art.

Applicant argues Scarborough does not suggest that printed material would be effective to form channels in adhesive (Remarks, p. 5, para 3). Examiner is not persuaded by this argument. While Scarborough does not disclose all the features of the present claimed invention, Scarborough is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely printing a pattern as a less expensive alternative to embossment, and in combination with the primary reference, discloses

Art Unit: 1783

the presently claimed invention. Furthermore, Sher discloses the adhesive maintains air channels formed from patterns on a release liner (col. 7, ln. 64-66).

Applicant asserts that one would not reasonably expect the printed material would remain on the carrier (Remarks, p. 5, para 3). Examiner is not persuaded by this argument. Sher discloses the release coating can be provided on a carrier before or after embossment (col. 9, ln. 17-22). Applicant offers no explanation or evidence about how a printed pattern formed between a release material and a substrate could transfer from the substrate through the coating and onto an adhesive.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1783

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WALTER MOORE whose telephone number is (571) 270-7372. The examiner can normally be reached on Monday-Thursday 9:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WM/

Walter Moore, Examiner AU 1783
7/19/2010

/David R. Sample/

Supervisory Patent Examiner, Art Unit 1783